UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
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Refer to:
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Re: Section 7 Formal Consultation on Forest Service, BIA/Coquille Indian Tribe and BLM Actions Affecting Oregon Coast Coho Salmon
Dear Agency Administrators:

This responds to your Biological Assessment (BA) requesting consultation on actions that may affect Oregon Coast coho salmon (OC coho), Oregon Coast steelhead trout (OC steelhead), and coastal searun cutthroat trout (searun cutthroat). The BA, dated September 14, 1998, was originally received by the National Marine Fisheries Service (NMFS) on September 17, 1998. An amended BA was subsequently received by NMFS on April 13, 1999. This consultation on USDA Forest Service (USFS), Bureau of Indian Affairs (BIA)/Coquille Indian Tribe and Bureau of Land Management (BLM) actions is conducted under section 7(a) (2) of the ESA, and its implementing regulations, 50 CFR Part 402.

BACKGROUND

The listing of OC coho (Oncorhynchus kisutch) as a threatened species under the Endangered Species Act (August 10, 1998, 63 FR 42587) became effective on October 9, 1998. NMFS defines the OC coho Evolutionary Significant Unit (ESU) as including all native, naturally spawned populations of

coho salmon and their progeny that are part of the biological ESU and reside below long-term, naturally impassible barriers in streams between the Columbia River and Cape Blanco (exclusive of the Columbia River). NMFS proposed critical habitat for OC coho on May 10, 1999 (64 FR 24998).

OC steelhead (O. mykiss), also occupy river basins between the Columbia River and Cape Blanco, Oregon (exclusive of the Columbia River). OC steelhead, although classified as a candidate species by NMFS, were determined to not warrant listing on March 19, 1998 (63 FR 13347).

Populations of searun cutthroat (O. clarki clarki) from Washington to California (excluding Umpqua River cutthroat, which were previously listed as endangered) were classified by NMFS as candidate species on July 14, 1997 (62 FR 37560). Coastal cutthroat trout populations (generally including resident populations above migration barriers) from the mouth of the Columbia River south to Cape Blanco were subsequently proposed by NMFS and the U.S. Fish and Wildlife Service (FWS) on April 5, 1999, to constitute the Oregon Coast coastal cutthroat ESU (64 FR 16397). Although NMFS concluded that the Oregon Coast coastal cutthroat ESU (OC cutthroat) did not warrant listing at that time, NMFS considers the OC cutthroat a candidate for future listing and will revisit the listing determination within four years.

A team (Level 1 team) of fish biologists from NMFS and the administrative units for the portion of the OC coho ESU from the Umpqua River south to Cape Blanco prepared this BA. The Level 1 team prepared the BA as established by the following interagency guidance: (1) The February 26, 1997, streamlining consultation agreement; and (2) Section 7 consultation direction dated June 5, 1998. Project descriptions and effect determinations produced by the action agencies were reviewed and concurred upon by the Level 1 team following procedures described in Attachments 2 and 3 of the NMFS Biological Opinion and Conference Opinion on continued Implementation of Land and Resource Management Plans (USFS) and the Resource Management Plans (BLM), hereafter referred to as the LRMP Opinion, dated March 18, 1997.The effects of the grouped and individual actions proposed in the BA were evaluated by the Level 1 team at project[1] (or site), watershed[2], and subbasin[3]

[1]Project sites are areas of variable size, but typically range from tens to hundreds of acres, and are where specific management activities take place (FEMAT, 1993, p.V-59). Some actions, especially timber sales, involving multiple activities at multiple sites, require assessments of combined effects over larger areas (e.g., drainages or subwatersheds, which range from hundreds to thousands of acres in size).

[2]A watershed is the drainage basin contributing water, organic material, dissolved nutrients, and sediments to a stream or lake. For the purposes of this consultation, watershed will refer to "fifth field" hydrologic unit code (HUC) watersheds which have been cooperatively delineated by the USFS and BLM. Watersheds are made up of smaller drainage basins known as subwatersheds. Watersheds (and some large subwatersheds or aggregates of subwatersheds) are the proper size (20-200 square miles) for conducting Watershed Analysis and assessing many key processes and features affecting ecosystem function.

[3]Subbasins are aggregations of watersheds that drain to a common water body such as a large river or the ocean. For the purposes of this consultation, subbasins refer to the "Section 7 subbasins", which were identified by the Level 1 team as having sufficient biological and geophysical attributes to warrant designation.

scales using criteria based upon the biological requirements of listed, proposed and candidate salmonid species (Attachment 3 of the LRMP Opinion) and the Aquatic Conservation Strategy objectives of the Northwest Forest Plan (USDA and USDI 1994, p. B9-11). According to the procedural expectations of the LRMP Opinion, the Level 1 team discussed the subject actions on the Siskiyou and Siuslaw National Forests, BIA/Coquille Indian Tribe lands, and the Coos Bay and Roseburg BLM Districts at meetings in Coos Bay or Roseburg, Oregon on August 13, 24 and 25, 1998; September 10, 1998; and March 29 and April 13, 1999.

The BA separated the proposed actions into two categories: (1) Actions found to "may affect, but not likely to adversely affect" (NLAA) OC coho; and (2) actions found to "may affect, and likely to adversely affect (LAA) this species. A separate concurrence memo, dated October 7, 1998, completed informal consultation on the actions that NMFS concurred were NLAA OC coho. This Opinion applies exclusively to actions LAA OC coho listed below in Tables 3 and 4, and will conclude consultation for the actions proposed in the BA dated September 15, 1998.

The BA also requests NMFS to conference on the effects of the proposed actions to OC steelhead and searun cutthroat trout. The LRMP Opinion concluded that land management actions, when considered at the watershed scale, are assumed to have similar effects upon OC coho, OC steelhead, and coastal cutthroat trout because similar aquatic habitat conditions are necessary for survival and recovery of those species. Likewise, the BA and the Level 1 team considered effects at the site-scale to be similar for OC coho, OC steelhead, and coastal cutthroat trout downstream of longstanding barriers (i.e., preventing upstream passage for hundreds to thousands of years). However, the BA and Level 1 team did not consider the potential for all site-scale impacts potentially adversely affecting individual coastal cutthroat residing above barriers. Therefore, NMFS limits this Opinion to evaluating effects to OC coho, proposed critical habitat for OC coho, OC steelhead, and populations of OC cutthroat below barriers. NMFS or the FWS will determine on a case-by-case basis whether populations of coastal cutthroat above barriers in the Oregon Coast ESU warrant protection within the next year (April 5, 1999, 64 FR 16397).

If OC steelhead or populations of OC cutthroat evaluated by this Opinion become listed at a later date, NMFS expects that this Opinion will be the basis for a biological opinion for those listings. Likewise, if critical habitat is either designated or proposed for OC coho, OC steelhead, or OC cutthroat populations below barriers (as described above), NMFS expects that this Opinion will be the basis for a biological opinion for those critical habitat determinations. Furthermore, the included Incidental Take Statement (see page 30) is expected to become effective following the NMFS' adoption of this Opinion once a listing for these populations of OC cutthroat or OC steelhead within the action area becomes final (50 CFR §402.10(d)).

PROPOSED ACTIONS

The Coos Bay and Roseburg BLM Districts, the BIA/Coquille Indian Tribe, the Siskiyou National Forest, and the Siuslaw National Forest (hereafter collectively referred to as the administrative units) propose the actions in Tables 3 and 4. Although many actions are ongoing or may occur in 1999, others (e.g., some timber sales) may not be fully implemented for up to 10 years. All actions in Tables 3 and 4 are bound by the following criteria: the administrative units determine that these activities are consistent with the four key components of the Northwest Forest Plan's (NWFP) Aquatic Conservation Strategy (i.e., riparian reserves, key watersheds, watershed analysis, watershed restoration), as well as applicable land allocations and NWFP standards and guidelines. In addition, all proposed actions are subject to the administrative unit's requirements for implementing the appropriate National Environmental Policy Act (NEPA) planning and analysis. Programmatic actions are aggregated with individual actions when watershed and basin scale environmental baselines and effect determinations are evaluated by the Level 1 team.

Programmatic Actions

The activities listed below in Table 3 represent categories of actions (programmatic actions) which will be undertaken in 1999 by the administrative units. These programmatic activities represent multiple actions routinely implemented in most watersheds (e.g., watershed restoration, fish habitat restoration, road or facility maintenance, recreation developments, and non-commercial silviculture). Although listed by categories, fishery biologists from the respective administrative unit evaluate each of the proposed programmatic actions to ensure that any resultant effects are anticipated to be localized and of short duration.

The administrative units requested consultation on two categories of programmatic actions, discretionary right-of-way agreements and discretionary road use permits, that may involve interrelated or interdependent actions.[4] Interrelated or interdependent actions may involve actions taken on non-federal lands that would not occur but for the federal road permit issuance. Without knowing the details of potential interrelated and interdependent activities, the NMFS cannot effectively analyze effects of those programmatic actions. Therefore the NMFS is unable to conclude formal consultation on the programmatic actions of discretionary rights-of-way agreements and discretionary road use permits.

[4]The ESA implementing regulations define "Effects of the action" as, "...the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline.... Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration" (50 CFR §402.02).

Individual Actions

Table 4 lists individual actions proposed by the administrative units. The proposed actions, organized by subbasin and watersheds, are described below.

Sixes and New Rivers Subbasin

Sixes River Watershed

The Siskiyou National Forest (SNF) proposes to repair 11 sites damaged in the November 1996 storms with the Sixes River Road and Flood Repair action. The repairs are designed to reduce future road-related sediment deliveries by stabilizing road prisms and upgrading culverts to handle flows equivalent to a 100-year event.

Coquille River Subbasin

Upper South Fork Coquille Watershed

The SNF proposes two timber sales and a road and flood repair project within the Upper South Fork Coquille River watershed.

The Skinny Doe Timber Sale proposes 428 acres of commercial thinning, including 61 acres within riparian reserves. No-cut buffers of 50, 100, and 200 feet are prescribed for intermittent, perennial, and fish-bearing streams, respectively. Approximately 5.4 miles of permanent[5] road construction and 0.6 miles of temporary[6] road construction are proposed. The permanent road construction will establish crossings over four intermittent and four perennial streams.

The Port Orford Cedar Salvage Sale proposes 172 acres of salvage designed to reduce the infection rate of a fungal root rot affecting Port Orford cedar (POC) trees. All POC within 25-50 feet of roads within high density stands of POC are to be "sanitized" (i.e., cut down), and either left on-site or commercially harvested. Other activities associated with the POC salvage include road closures, planting resistant stock of POC, and an administrative study evaluating experimental disease control. Although no commercial

[5] Roads that will not be decommissioned within one year after completion of activities associated with the proposed action. Decommissioning includes those measures necessary to restore pre-road hydrologic functions and to minimize the risk of road-related sediment delivery to streams (e.g., culvert removal, decompaction of road surfaces, outsloping, waterbarring, fill removal, revegetating with native species, and barricading to prevent vehicular traffic).

[6] Roads that are constructed and decommissioned during the dry season of the same year (usually May 15 to October 15).

extraction of POC will occur adjacent to fish-bearing streams, approximately 70 of the 172 acres in the sale area are within riparian reserves.

The South Fork Coquille Road and Flood Repair proposes repairs at 57 sites, ranging from road fill/retaining wall reconstruction and road realignment to culvert replacement and upgrades.

Lower South Fork Coquille Watershed

The Coos Bay BLM's South Fork Skyline Timber Sale proposes 32 acres of regeneration harvest and 68 acres of commercial thinning in the Lower South Fork Coquille watershed. About 31 acres of the commercial thinning will occur within riparian reserves. No-cut buffers (50' minimum) on each side of the stream are prescribed. Approximately 0.7 miles of semi-permanent[7] road construction, and an additional 1.7 miles of road decommissioning (includes one culvert removal) are associated with the action. The unpaved haul routes for this harvesting include 22 stream crossings. Winter haul may occur.

Middle Fork Coquille Watershed

Big Creek Subwatershed. The BIA/Coquille Indian Tribe proposes 340 acres of regeneration harvest and approximately 0.8 miles of road construction (0.3 semi-permanent and 0.9 temporary) in the Big Creek subwatershed. Another 1 mile of road may be closed or decommissioned. Riparian reserve widths are proposed to be no less than half a site tree width or 110' (whichever is more) along each side of four intermittent streams, converting approximately 6 acres of interim riparian reserve to the Northwest Forest Plan (NWFP) matrix[8] land allocation. In addition, another 13 acres of salmonberry brush within riparian reserves will be planted to conifers.

Sandy-Remote Subwatersheds. The Coos Bay BLM proposes 709 acres of regeneration harvest and 148 acres of commercial thinning in the Sandy-Remote subwatersheds. Approximately 19 acres of the commercial thinning is within riparian reserves, where 30- to 50-foot no-harvest buffers on both stream sides are prescribed. About 4.6 miles of semi-permanent road construction and an additional 4.9 miles of decommissioning are proposed. The road construction proposed within riparian reserves (.04 miles total) includes one stream crossing. Coos Bay BLM proposes to reduce interim riparian reserve widths along 29 intermittent stream reaches to 90-120 feet, converting a net 67 acres of interim riparian reserve to matrix land allocation.

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[7] Roads that will be decommissioned within one year after completion of activities associated with the proposed action.

[8] Matrix is one of the seven land allocations identified by the Northwest Forest Plan. Matrix lands represent 16% of the federal land within the range of the spotted owl, and is the area in which most timber harvest and silvicultural activities will be conducted (USDA and USDI 1994, p. 7).

Upper Rock Creek Subwatershed. The Coos Bay BLM proposes 85 acres of regeneration harvest and 52 acres of commercial thinning in the Upper Rock Creek subwatershed. Approximately 0.7 miles of semi-permanent road construction remains to be built for these ongoing actions. Winter haul on gravel roads involving five stream crossings may occur. An additional 1.7 miles of road decommissioning, which involves two culvert removals, is planned. No other activities within riparian reserves are proposed.
Camas Valley Subwatershed. The Roseburg BLM District (Roseburg BLM) proposes 131 acres of regeneration harvesting and 0.3 miles of road construction (0.1 semi-permanent and 0.2 temporary) in the Camas Valley subwatershed. Another 0.7 miles of road decommissioning, involving one culvert removal and 6.3 miles of road renovation, are proposed. Winter haul and winter logging on a portion of the sale area may occur. No other activities within riparian reserves are proposed.

North Fork Coquille Watershed

Coos Bay BLM proposes 262 acres of commercial thinning in the Fairview subwatershed. Approximately 140 acres of the thinning is within riparian reserves. The thinning will occur within several stands comprised primarily of 50-year-old conifers. The thinned trees average 13 inches in diameter. The minimum width of the no-cut buffers proposed for streams adjacent to the thinned stands depends on site conditions, but will be as narrow as 10 feet beyond the inner gorge on small perennial and intermittent tributaries. An additional 427 acres of thinning (231 within riparian reserves), as well as 0.3 miles of semi-permanent road construction and 0.5 acres of helicopter landing area (all within riparian reserve) in association with this proposed timber sale (Woodward 1-11 Commercial Thinning) were implemented prior to January 28, 1999, and before formal consultation had been concluded. Although the effects of these activities implemented prior to January 28, 1999, are considered in this Opinion, NMFS does not consider them to be part of the proposed action because of inconsistencies with the action as originally proposed and consulted upon. Therefore, only those Woodward 1-11 Commercial Thinning activities implemented after January 28, 1999, are covered by this Opinion's Incidental Take Statement.

Coos Bay BLM also proposes 16 acres of selective alder cutting and removal for road maintenance purposes along 3.4 miles of paved road in the upper reaches of the Middle Creek subwatershed. Approximately 13 acres of the selective cutting and 3 miles of the road are within riparian reserves.

Coos/Tenmile Subbasin

South Fork Coos Watershed

Coos Bay BLM proposes 61 acres of regeneration harvest and approximately 1 mile of semi-permanent, ridge-top road construction in the Tioga Creek subwatershed. No activities are planned within riparian reserves.

NMFS APPROACH TO DETERMINING JEOPARDY

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA as defined by the consultation regulations, 50 CFR Part 402. When NMFS issues a conference of biological opinion, it uses the best scientific and commercial data available to separately determine whether a proposed Federal action is likely to: (1) Jeopardize the continued existence of a proposed, listed, or candidate species, and/or (2) destroy or adversely modify a proposed or listed species' critical habitat.

Attachment 2 of the LRMP Opinion describes the four stages of analysis NMFS uses to determine jeopardy: (1) Define the biological requirements of the species; (2) evaluate the relevance of the environmental baseline to the species' current status; (3) determine the effects of the ongoing or proposed actions on the species; and (4) determine whether the species can be expected to survive (with an adequate potential for recovery) under the effects of the proposed or continuing action, the environmental baseline, and any other cumulative effects.

Attachment 2 of the LRMP Opinion also describes the criteria NMFS uses for determining whether USFS and BLM actions within the range of the NWFP provide for the survival and recovery of anadromous salmonids. In summary, NMFS considers two steps: (1) Is the proposed project in compliance with the standards and guidelines for the relevant land allocations, and (2) does the proposed project meet all pertinent ACS objectives. Actions meeting these conditions will result in improved habitat conditions and thereby increase freshwater survival of OC coho, OC steelhead, and sea-run cutthroat.

NMFS also uses the Matrix of Pathways and Indicators (MPI) evaluation to determine whether actions destroy or modify critical habitat (i.e., habitat alterations that appreciably diminish the value of critical habitat for both the survival and recovery of a listed species). Activities that are likely to destroy or adversely modify critical habitat would also be likely to jeopardize the species.

Define the Biological Requirements of the Species.

The status and biological requirements for OC coho are well described in the proposed and final rules (July 25, 1995, 60 FR 38011 and August 10, 1998, 64 FR 42587, respectively), the LRMP Opinion, and Biological Review Team findings (Weitkamp *et al.* 1995, p.113-119, 128-129).

Similarly, the status and biological requirements for OC steelhead are described in 63 FR 13347 (March 19, 1998), and Busby *et al.* (1996, p.15-35, 121-124). The LRMP opinion, the proposed rule (April 5, 1999, 64 FR 16397), the NMFS status review of coastal cutthroat (Johnson *et al.* 1999, p.38-50) and Hall *et al.* (1997) provide the best compilations of searun cutthroat biology that currently exist.

The NMFS proposed critical habitat for OC coho on May 10, 1999 (64 FR 24998). Essential features of coho salmon critical habitat include adequate (1) substrate, (2) water quality, (3) water quantity,

(4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions. NMFS defines critical habitat based upon the following key riparian functions: shade, sediment, nutrient or chemical regulation, streambank stability, and input of large woody debris or organic matter.

Evaluate the Relevance of the Environmental Baseline to the Species' Current Status.

Action Area

The "action area" is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved by the action" (50 CFR. § 402.02). The action area for this consultation thus includes all of the lands administered by the Siskiyou and Siuslaw National Forests, the Roseburg and Coos Bay BLM Districts, and the Coquille Forest Reservation (BIA/Coquille Indian Tribe) within the following watersheds: (1) Sixes River, (2) New River G3, (3) Upper South Fork Coquille, (4) Lower South Fork Coquille, (5) Middle Fork Coquille, (6) North Fork Coquille, (7) East Fork Coquille, (8) Middle Main Coquille, (9) Lower Coquille, (10) South Fork Coos, (11) Coos Bay North/Coos Bay South, and (12) Tenmile and Umpqua Dunes. These watersheds, which collectively total approximately 1.2 million acres, are located within three subbasins—Coos/Tenmile, Coquille River, and Sixes-New River.

The action agencies administer only 27% of the action area, ranging from about 66% of the Upper South Fork Coquille watershed to less than 1% of the Lower Coquille and Middle Main Coquille watersheds. The southern half of the action area is within the Klamath/Siskiyou physiographic province while the northern portions are primarily within the Tyee Sandstone province.

The Siuslaw National Forest administers the Oregon Dunes National Recreational Area (ODNRA) which is limited to a 1-3 mile wide patch of coastline containing few streams. The ODNRA administers most of the lower reach of Tenmile Creek, which is the only significant anadromous stream in the Tenmile and Umpqua Dunes watershed. Although the reach of stream administered by the ODNRA provides important migratory habitat, most rearing and spawning habitat is located further upstream and is primarily under private and state ownership.

The majority of the lands managed by the Roseburg and Coos Bay BLM lands are in a 25-mile long and 15-mile wide block running in a southeasterly direction from the South Fork Coos River to the headwaters of the Middle Fork Coquille River at the divide of the Oregon Coast Range. Small chunks of Coos Bay BLM administered lands are also found in the Sixes River watershed. Most of the BLM lands are in a checkerboard pattern (interspersed with private land) with the largest contiguous block forming the hydrologic divide between the North and East Forks of the Coquille River.

The BLM manages portions of four Key Watersheds[9]: The South Fork Coquille, Cherry Creek (North Fork Coquille), Upper North Fork Coquille, and Tioga Creek (South Fork Coos). Streams within the action area administered by BLM have also been identified by the State of Oregon as coho "core areas[10]," including Salmon Creek (South Fork Coquille), North Fork Coquille, Big Creek and Sandy Creek (Middle Fork Coquille), and Tioga Creek (South Fork Coos)(OCSRI 1997, Chapter 15). Due to mixed ownership in most watersheds, the BLM actions are just one of the management influences contributing to the condition of the aquatic habitat within and downstream of BLM administered tracts.
The BIA manages in trust for the Coquille Indian Tribe approximately 5,000 acres of lands in the Coquille River subbasin as the Coquille Forest Reservation. None of the Coquille Forest Reservation lands are designated as Key Watershed, although approximately 1,000 acres of the reservation are in the Big Creek subwatershed which is a coho "core area" and one of the most important contributors in the Middle Fork Coquille watershed to anadromous production (BLM 1997, p.112-133).

The lands managed by the Siskiyou National Forest are primarily a contiguous block within the headwaters of the Upper South Fork Coquille and the Sixes Rivers. Although the entire Upper South Fork Coquille is a Key Watershed (South Fork Coquille), only the Dry Creek subwatershed of the Sixes River has been designated as a Key Watershed. In addition to being designated as a coho "core area" for its spawning and rearing habitat, Dry Creek also supports winter steelhead, cutthroat, fall chinook, and even a few chum salmon (SNF 1997, p.A30-32). The South Fork Coquille remains an important stream for the spawning and rearing of winter steelhead, as well as an important source of wild broodstock for a hatchery program. Coho, on the other hand, remain quite depressed in the South Fork Coquille, quite likely as a result of habitat losses, over utilization, and past hatchery practices (SNF 1995, p.A21-24).

Environmental Baseline of Watershed Relevant Indicators

Attachment 3 of the LRMP Opinion describes how the MPI and the Checklist for Documenting Environmental Baseline and Effects of Proposed Action(s) on Relevant Indicators (Checklist) are used to characterize the environmental baseline in terms of current functional conditions of instream, riparian, and watershed elements that reflect local geologic and climatic conditions in the action area. The Level 1 team utilized the applicable Physiographic Area MPI (either Klamath Province/Siskiyou Mountains or Southwest Province Tyee Sandstone) and Checklist to characterize the environmental baseline for each 5th field Hydrologic Unit Code (HUC) watershed and Section 7 subbasin in which the agencies propose projects.

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[9] Key Watersheds are to be managed to provide high quality habitat and to act as refugia for at-risk anadromous salmonids (USDA and USDI 1994, p. B-18). Although Key Watersheds vary greatly in size, they are recognized by the federal agencies for their importance to 3 or 4 salmonids in the action area, including winter steelhead, and coho, fall and spring chinook, and chum salmon.

[10] Core Areas are drainages or stream reaches recognized by the State of Oregon as being critical to the persistence of salmon populations that inhabit those basins.

Table 1 summarizes the conditions found within the action area. The environmental baselines for the 5th field watersheds indicate most relevant indicators are "at-risk" or "not properly functioning."Table 1. Summary of habitat indicator environmental baselines for watersheds within the action area: Sixes River (SR); New River (NR); Upper South Fork Coquille (USFC); Lower South Fork Coquille (LSFC); Middle Fork Coquille (MFC); North Fork Coquille (NFC); East Fork Coquille (EFC); Middle Main Coquille (MMC); Lower Coquille (LC); South Fork Coos (SFCoos); Coos Bay North/South (CBNS) and Tenmile/Umpqua Dunes (TM).

Note: Because of physiographic differences, some indicators were not used in every watershed.

Habitat Indicator	Properly Functioning	At-Risk	Not Properly Functioning
Water Quality **Temperature**	-	SFCoos	all other watersheds
Turbidity	-	USFC, NFC, EFC	LSFC, MFC, MMC, LC, SFCoos, CBNS, TM
Chemicals/Nutrients	USFC, EFC, NR	SR	LSFC, MFC, NFC, MMC, LC, SFCoos, CBNS, TM
Access **Physical Barriers**	-	-	all watersheds
Habitat Elements **Substrate**	-	all other watersheds	SR, NR
Large Wood	-	-	all watersheds
Pool Area	-	USFC, LSFC, MFC, NFC, EFC, MMC, LC, SFCoos, CBNS, TM	
Pool Character/Quality	-	all other watersheds	SR, NR
Off-channel Habitat	-	USFC, EFC, SFCoos, CBNS, TM	SR, NR, LSFC, MFC, NFC, MMC, LC
Channel Conditions **Width/Depth Ratios**	-	USFC, SFCoos, EFC, CBNS, TM	SR, NR, LSFC, MFC, NFC, MMC, LC
Streambank Condition	-	all other watersheds	SR, NR, LSFC, MFC
Floodplain Connectivity	-	SR, NR, USFC, SFCoos, CBNS, TM	LSFC, MFC, NFC EFC, MMC, LC
Flow/Hydrology **Peak Flows**	-	SR	NR
Watershed Condition **Road Density/Location**	-	-	all watersheds

Habitat Indicator	Properly Functioning	At-Risk	Not Properly Functioning
Water Quality			
Temperature	-	SFCoos	all other watersheds
Turbidity	-	USFC, NFC, EFC	LSFC, MFC, MMC, LC, SFCoos, CBNS, TM
Chemicals/Nutrients	USFC, EFC, NR	SR	LSFC, MFC, NFC, MMC, LC, SFCoos, CBNS, TM
Disturbance History	-	all other watersheds	SR, NR, MMC, LC
Riparian Reserves	-	-	all watersheds
Landslides/Erosion	-	USFC, EFC	all other watersheds

Determine the Effects of the Ongoing or Proposed Action(s) on the Species.

The effects of the proposed actions upon OC coho, OC steelhead, and OC cutthroat are evaluated at site, watershed, and subbasin scales in the BA. The effects determinations are supported by the following: (1) Identification of routine actions which result only in short term, localized adverse effects at the site scale (see Table 3); (2) site scale MPI and Checklist determinations which predict the effects of the individual actions in Table 4 upon instream, riparian, and upslope indicators; (3) rationale for effect determinations at both site and watershed scales; and (4) checklists evaluating the combined effects of all previous, ongoing, and proposed actions upon the MPI indicators within each watershed and subbasin.

In addition, the BA contains Aquatic Conservation Strategy (ACS) consistency findings completed by interdisciplinary teams from the administrative units for each proposed individual action. The Level 1 team reviewed and concurred upon the ACS consistency findings that are relevant to listed, proposed, and candidate salmonids. The Level 1 team found the proposed actions consistent with the NWFP's land allocations, standards and guidelines, and the four essential components of the ACS (riparian reserves, key watersheds, watershed analysis, and watershed restoration).

Although the actions in Tables 3 and 4 are LAA OC coho and "may affect" OC steelhead or OC coastal cutthroat, the Level 1 team has determined that no additional measures to avoid or minimize adverse effects are required.

Site (Project) Effects Summary

Table 2 below summarizes the number and type of habitat indicators that the BA predicts will be degraded at the project scale by the proposed individual actions (16 timber sales, one road maintenance project, and two road and flood repair projects). Many MPI indicators (e.g., Water Temperature, Chemical Contamination, Physical Barriers, Pool Area and Quality, Off-Channel Habitat, Channel Condition and Dynamics, and Refugia) will not be affected by the proposed actions.

At the project scale, the BA indicates that the indicator "degrades" listed in Table 2 represent the following impacts: (1) Minor, short-term effects of inconsequential importance to the attainment of properly functioning habitat; or (2) long-term alterations (e.g., roads or stream crossings), which because of their location and limited extent, will not hinder attainment of the ACS objectives nor destroy or modify essential features of salmonid habitat at either the site or the watershed scale of assessment.

Table 2. Summary of MPI habitat indicators degraded at the site or project scale by the proposed individual actions.

Habitat Indicator	Number of Site "Degrades"
Water Quality (turbidity)	11 - all short term (seasonally for up to 3 years)
Substrate (sediment)	1 - all short term (1 to 3 years)
Large Woody Debris	1 - Port Orford Cedar "sanitation"
Road Density &Location	1 - access to matrix land allocation
Disturbance History	1 - ground disturbance with road work and timber harvest in matrix land allocation
Riparian Reserves	3 - construction of stream crossings and road/flood repairs 2- temporary decreases in canopy closure from thinning

NMFS and the Level 1 team concur with the effect determinations. Detailed descriptions of the potential effects of timber harvest and associated activities on salmonid habitat are presented by FEMAT (1993, chapter V), Spence *et al*. (1996, p.105-119, 160-166), as well as a NMFS document entitled "Potential Effects of Timber Harvest and Associated Activities on Salmonid Habitat and Measures to Minimize Those Effects" (NMFS, 1997). These are incorporated by reference into this opinion because NMFS is not aware of any other special characteristics of the particular sales that would cause greater or materially different effects on the subject salmonids species and their habitat than is discussed in these references. The NMFS has considered the applicability of the above analyses to each of the timber sales identified in the BA and in Table 4 of this Opinion. Similarly, NMFS is not aware of any newly available information that would materially change these previous effects analyses.

The programmatic actions listed in Table 3 may also temporarily degrade habitat indicators at the site where implemented. However, any effects resulting from the proposed programmatic actions have been determined by a qualified fisheries biologist and/or interdisciplinary team to be localized, short term impacts, and therefore, will not impede attainment of properly functioning habitat. The NMFS concurs with the Level 1 team determination that the above requirements for participation by a qualified biologist in the NEPA planning process, adherence to the NWFP standards and guidelines, and each administrative unit's Best Management Practices ensures that no additional measures to reduce adverse impacts are necessary. Several of the programmatic activities (e.g., watershed and fish habitat restoration projects, culvert upgrades) are expected to have long-term benefits to salmonid habitat.

Watershed Assessments

Taking the environmental baseline for each watershed into account, the Level 1 team assessed the combined effect of all proposed and ongoing actions upon each of the habitat indicators within the action area. An ACS consistency assessment developed for each proposed individual action assisted the Level 1 team review.

The BA indicates that in each case, due to the location, project design, and the limited spatial and temporal extent of site-specific effects, the Level 1 team concluded that the combined effect of all ongoing and proposed actions would neither degrade nor retard the recovery of any relevant habitat indicators important to anadromous salmonids when considering processes operating at the watershed or subbasin scales.

Rationale provided in the BA and supporting documentation for each watershed is provided below. Although the combined effects of all ongoing and proposed activities were evaluated by the Level 1 team and NMFS, the discussion below emphasizes individual actions and examples of the most relevant programmatic activities proposed in each watershed.

Sixes River Watershed

- 85,936 acres - approximately 28% administered by the Siskiyou National Forest (SNF) and Coos Bay BLM (CBBLM).

- Sixes River Watershed Analysis completed in 1997 by the SNF.

- Dry Creek subwatershed (approximately 10,000 acres) is a Tier 1 Key Watershed.

Sixes Road Repairs. The BA indicates the Sixes Road Repairs proposed by the SNF will deliver short term pulses of fine sediments to the adjacent mainstem of the Sixes River and other fish bearing streams during the repairs. The action will disturb small areas within riparian reserves at the 11 sites scheduled for repairs; however, the adverse impacts are limited to previously impacted sites along an existing road system. The repair sites (individually or cumulatively) are not critical to riparian and watershed functions or to local plant communities. The project, which is expected to take 1-2 years, repairs roads identified as main access travel routes by watershed analysis. Project design and mitigation measures, which includes a seasonally restricted instream work period, are expected to limit the adverse effects from fine sediments to within 300 feet of each project area. The small amount of fines delivered to the stream network are expected to dissipate downstream with no further adverse effects after the first fall storms. Current and potential sediment delivery sites will be made less susceptible to future high water events by the repairs. No new roads are proposed and no degradation of key riparian reserve functions or essential features of fish habitat are anticipated.

Since approximately 98% of the 22,000 acres the SNF manages are designated as wilderness, Key Watershed, riparian reserve, late successional habitat (LSR), or special wildlife areas (SNF 1995, p. O-5), these repairs to roads outside of the Key Watershed are not expected to hinder recovery of aquatic habitat or ecosystem processes in the watershed. NWFP standards and guidelines for Road Maintenance are addressed by the following measures: (1) An interdisciplinary team developed road repair design criteria that would lead to improved Riparian Reserve conditions (RF-2c), and (2) culverts and road prisms will be upgraded to withstand a 100-year flood (RF-4). In addition, all roads to be repaired are identified as main travel access routes for uses (administrative, recreation, special forest products, and timber harvest) identified in the Sixes River Watershed Analysis (SRWA) and the actions are consistent with SRWA access management recommendations (SNF 1997, p.S-17). A Transportation Network Analysis was completed in 1994 (SNF 1997, p.S-14), and Appendix D of the SRWA describes SNF's past and proposed watershed restoration program within the watershed (including road decommissioning and repairs).

Programmatic Activities. Ongoing programmatic activities include dispersed camping and maintenance of two developed campgrounds (Sixes River and Edson Creek) and one boat ramp. Recreational activities in riparian areas often adversely affect key riparian functions supporting salmonids (e.g., bank stability and recruitment of large woody material) and may indirectly lead to angling mortality. Although the effects of recreational activities must be evaluated locally, they are likely to be minor compared to the influence of roads, logging, grazing, and mining (Clark and Gibbons 1991, p. 479). NWFP standard and guideline RM-2 requires that dispersed and developed recreation practices that retard or prevent attainment of the ACS objectives be adjusted. Neither the BA nor watershed analysis identifies recreational activities as a fisheries management issue warranting specific management recommendations or as a priority for watershed restoration. Recreational suction dredge mining (intake of 4 inches or less and a 10 horse or less motor) is also proposed. Most of the suction dredge mining is expected to occur in the South Fork of the Sixes River. Suction dredging, by disturbing and resorting the streambed, can adversely affect channel morphology, water quality, spawning gravels, and incubating salmonid eggs or alevins (Harvey and Lisle 1998). Watershed analysis recommends that administration of mining activities be maintained or increased, which is consistent with LRMP Opinion terms and conditions and SNF (1995, p. S-17).

NMFS Conclusion. The NMFS concurs with the Level 1 team's determinations. NMFS notes the terms and conditions in the LRMP Opinion for mining and the ongoing improvements by the SNF to administer and monitor recreational mining. The minor, short term impacts resulting from the ongoing or proposed projects will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale. Although the SNF lands are consolidated and should slowly recover given the current land allocations, aquatic and riparian conditions on private lands will also influence the watershed's rate of recovery. Private holdings, primarily industrial timber land or ranches, account for approximately 70% of the watershed.

New River Frontals Watershed

- 99,332 acres - approximately 5% administered by the CBBLM.

- No watershed analysis, however New River Area of Critical Environmental Concern (ACEC) Management Plan completed in 1995.

- Several tributaries to New River are ODFW coho "core" areas.

Only programmatic actions, including routine maintenance and repair, two grazing allotments undergoing updated management plans, and vegetation clearing on the dunes to improve nesting habitat for snowy plovers are proposed.

NMFS Conclusion. The NMFS, noting the inclusion of required measures and conditions from the LRMP Opinion into the grazing management plans, concurs with the Level 1 team's determinations. The minor, short term impacts resulting from the proposed programmatic activities will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale. Given the relatively small amount of Federal ownership, watershed processes will be determined primarily by aquatic and riparian management on private lands. NMFS also notes the importance of New River and the New River ACEC to the watershed.

Lower Coquille Watershed

- 66,697 acres - <1% administered by the CBBLM.

NMFS Conclusion. Only programmatic actions are proposed in this watershed and the NMFS concurs with the Level 1 team's determinations.

Middle Main Coquille Watershed

- 70,655 acres - approximately 4% administered by the CBBLM.

NMFS Conclusion. Only programmatic actions are proposed in this watershed and the NMFS concurs with the Level 1 team's determinations.

Upper South Fork Coquille Watershed

- 91,993 acres - approximately 67% administered by the SNF.

- South Fork Coquille Watershed Analysis completed in 1995 by the SNF.

- The entire watershed is Tier 1 Key Watershed.

South Fork Coquille Road Repair Project. The BA indicates that the objectives and anticipated effects of these repairs are very similar to those described previously for the Sixes River road and flood repair. Although the South Fork Coquille Road Repair Project is a larger and a potentially more challenging project, only short term pulses of fine sediments to streams adjacent to the repair sites and localized disturbance within the surrounding riparian reserves are anticipated. With one exception, however, the adverse impacts are limited to previously impacted sites along an existing road system. The single exception will result in the realignment of road at a site where an interdisciplinary team determined the action would lead to improved conditions in the riparian reserve over the long term. The repair sites (individually or cumulatively) are not critical to riparian and watershed functions or to local plant communities. The project, which is expected to take 1-3 years, repairs roads identified by watershed analysis as main access travel routes. Project design and mitigation measures, which includes a seasonally restricted instream work period, are expected to limit the adverse effects from fine sediments to within 300 feet of each project area. The small amount of fines delivered to the stream network are expected to quickly dissipate with no further adverse effects after the first fall storms. Current and potential sediment delivery sites will be made less susceptible to future high water events by the repairs. NWFP standards and guidelines for Road Maintenance are addressed by the following measures: (1) An interdisciplinary team developed road repair design criteria that would lead to improved Riparian Reserve conditions (RF-2(c)), and (2) culverts and road prisms will be upgraded to withstand a 100-year flood (RF-4). In addition, the South Fork Coquille watershed analysis identifies all roads proposed for repair as main travel access routes, and high risk roads in the watershed have been identified and the repairs are consistent with restoration opportunities identified by watershed analysis (SNF 1995, p.4&A43), which addresses NWFP standard and guideline RF-7.

Skinny Doe Timber Sale. The BA indicates the Skinny Doe Timber Sale (428 acres of commercial thinning) has the potential to cause short term (1-3 years) increases in turbidity, as well as affect riparian reserves and increase the road density within the watershed.

Although more than a negligible probability of delivering fine sediments 1.5 miles downstream through three tributary streams to a fish bearing stream exists, only about 300-600 feet of fish habitat below each tributary would be adversely affected. The adverse effects of the fine sediments are anticipated to last only until dissipated by the first high water events in the fall.

Road density is proposed to be increased in a watershed (and subwatershed) that is "not properly functioning" for this habitat indicator. The SNF claims the proposed permanent road construction (5.4 miles) is necessary to access and manage matrix allocation lands. Matrix land allocations in the watershed comprise approximately 20% of the 61,300 acres managed by the SNF. Alternative road routes were found to be environmentally and/or technically unfeasible. The road construction takes advantage of an abandoned but stable railroad grade, and proposes improvements that will disperse runoff and any interception of subsurface water.

The degradation of riparian reserves associated with the action is limited to localized clearing for the eight stream crossings associated with the road construction. The stream crossings will be designed to allow woody debris and flood waters to flow over the culverts in the event of plugging or debris torrents. In addition, the culverts will be oversized and designed to create a bottom of coarse bed material. The BA indicates that the 3.5 acres of riparian reserve affected by the crossings is not of sufficient quantity or significance to decrease overall riparian function or aquatic habitat within the affected Coal Creek subwatershed. The thinning of 61 riparian reserve acres is limited to overcrowded second-growth stands exhibiting decreased growth rates. The riparian thinning is consistent with recommendations in the South Fork Coquille Watershed Analysis (SNF 1997, p. A44) and NWFP standard and guideline TM-1(c).

Port Orford Cedar Salvage. Timber harvest activities associated with this action have the potential to result in the temporary delivery of small amounts of fine sediments to nearby streams. However, the project design criteria (e.g., dry season operating season, maintain vegetation providing shade and bank stability, removal of wood only from the Riparian Reserves of non-fish bearing stream channels) adequately limit the extent, magnitude, and duration any potential adverse effects to water quality. Although the removal of cedar trees from the riparian area may reduce wood recruitment to stream channels, removal of wood will occur only in sites having adequate downed woody material to achieve current and future ACS objectives. The killing of infected trees is expected to reduce future loss of susceptible trees. The proposed activities are consistent with watershed analysis (SNF 1997, p.T22&23) and NWFP standard and guideline TM-1(b) which states, "Salvage trees only when watershed analysis determines that present and future coarse woody debris needs are met and other ACS objectives are not adversely affected."

Programmatic Activities. Campground and road maintenance, as well as recreational mining, are the primary programmatic activities proposed. Watershed analysis notes minor, short term effects from recreational mining but also recommends continued mining at current levels and compliance monitoring (SNF 1997, p. S13&16).

NMFS Conclusion. NMFS concurs with the above findings. Any associated adverse effects to anadromous salmonids or their habitat are expected to be minor in magnitude and short-lived in duration. Although there will be adverse impacts to stream and riparian habitat from the proposed road building, no long term degradation of key riparian reserve functions or features of habitat essential to anadromous fish are anticipated because of project design and location (1.5 miles above anadromy). Approximately 75% of the SNF lands are managed as LSR and riparian reserves (SNF 1995, p. C5), and recovery of degraded riparian and watershed conditions within the federally administered portion of the watershed should continue unabated. The minor impacts resulting from the projects are consistent with NWFP guidelines and will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale. NMFS concurs with the Level 1 team that tailoring the Road Construction term and condition 8(d)(ii) of the LRMP Opinion to account for the substantial net decrease in road mileage achieved by the SNF in the Upper South Fork Coquille watershed is appropriate for this action and comports with the intent of term and condition 8(d)(ii). With implementation of the Skinny Doe Timber Sale, the SNF will have decommissioned 21.89 miles and constructed 9 miles of road within this Key

Watershed since 1994. NMFS notes that the SNF's cumulative effects assessment includes field observations by qualified personnel (a professional hydrologist) confirming that similar timber harvest activities and road densities in the watershed have
not resulted in noticeable degradation of channel geomorphology or aquatic habitat. Future actions should continue to account for the watershed being designated as a refuge for native anadromous fish (i.e., a Key Watershed), and management is expected to allow recovery of these habitat indicators to occur at a substantially faster rate than in other federal watersheds (FEMAT 1993, V-75). NMFS notes the terms and conditions in the LRMP Opinion for mining and the ongoing improvements by the SNF to administer and monitor recreational mining.

Lower South Fork Coquille Watershed

- 65,643 acres - approximately 18% administered by the CBBLM, SNF, and BIA/Coquille Indian Tribe.

- Lower South Fork Coquille Watershed Analysis completed in 1996.

- The 24,055 acre portion designated as Tier 1 Key Watershed contains BLM, SNF, and private lands.

South Fork Skyline Timber Sale. This Coos Bay BLM action is proposed within the Rowland-Baker-Salmon drainages which is designated as a Key Watershed. This sale proposes 32 acres of regeneration harvest and 68 acres of commercial thinning. The BA indicates that intermittent pulses of sediments resulting from road construction and decommissioning, culvert replacement, and winter haul associated with the timber sale will be delivered to fish bearing reaches of Baker and Dement Creeks during the 30-month contract period. The resultant adverse effects are expected to be short term and attenuated by the contribution of unaffected tributary streams. Coos Bay BLM predicts a net reduction in sediment deliveries to the stream network over the long term from the road decommissioning proposed.

In addition, the Coos Bay BLM expects the silviculture treatments within riparian reserves (31 acres of commercial thinning) to stimulate growth of desired species, establish appropriate stand densities, and enhance the size of large woody debris over time. The proposed silviculture treatments are consistent with watershed analysis recommendations (BLM 1996a, p.107) and the NWFP standard and guideline TM-1(c) which states, "Apply silvicultural practices for Riparian Reserves to control stocking, . . . and acquire vegetation characteristics needed to attain ACS objectives."

The action will result in a small, but net decrease in road density within the watershed. In addition, the BA indicates that no disturbance of unstable or potentially unstable areas or impact to aquatic refugia will occur. Despite a small reduction in the percentage of BLM stands providing late-successional and old-growth habitat after the timber harvest (24.4% to 23.8%), the 15% retention required by the BLM in the watershed will be exceeded. Although only an estimated 43% of the approximately 5,000 acres of

federally managed riparian reserves within the watershed are in desired conditions (BLM 1996a, p.15, 61), recovery of these riparian areas will continue with implementation of the NWFP.
Programmatic Activities. An existing rock quarry (Baker Creek), to be managed consistent with LRMP Opinion terms and conditions, is found within the watershed. In addition, spawning surveys are proposed each year in Salmon Creek.

NMFS Conclusion. NMFS concurs with the above findings. Any associated adverse effects to anadromous salmonids or their habitat are expected to be so minor in magnitude that the long term recovery of habitat indicators at neither the site nor watershed scale will be impaired. Management on private lands will also play a critical role in recovery of this Key Watershed because federal agencies administer only about 42% of the drainage area. However, NMFS notes that the Rowland-Baker-Salmon Key Watershed is designated as a refuge for native anadromous fish, and that management is expected to allow recovery of these habitat indicators to occur at a substantially faster rate than in other federal watersheds (FEMAT 1993, V-75). The BA indicates that 12 of the 16 Matrix habitat indicators for the watershed, including all steam channel condition indicators, road density and location, and riparian reserves are "not properly functioning." Therefore, NMFS notes a Conservation Recommendation for future management in the watershed (see page 30).

Middle Fork Coquille Watershed

- 197,069 acres - approximately 33% administered by the BLM, SNF, and BIA/Coquille Indian Tribe.

- Watershed Analyses completed by the CBBLM include the Middle Fork Coquille (1994), Sandy-Remote (1996), and Big Creek (1997).

- No Key Watersheds.

Due to the watershed's large size, the discussion below describes the effects of proposed actions in the context of individual or group of subwatersheds. The BLM lands in the Middle Fork Coquille watershed are primarily (87%) matrix allocations (BLM 1994, p. 9).

Big Creek Subwatershed. The BA indicates that the road building and decommissioning proposed by the BIA/Coquille Indian Tribe will lead to a short term increase and long term reduction in fine sediment delivery to streams in the 16,700-acre Big Creek subwatershed. Although elevated turbidities may reach coho salmon habitat located approximately 2 miles below the road work, the effects are not expected to extend outside the subwatershed. In addition, sediment delivery is expected to be of insufficient duration and magnitude to adversely affect stream substrates in the subwatershed.

This action also will result in 340 acres of regeneration harvest over six years and a potential 22-acre reduction in riparian reserves of intermittent streams through modification of the NWFP's interim widths. The BA indicates that regeneration harvesting and riparian reserve modifications are consistent with opportunities and priorities identified in the Big Creek Watershed Analysis (BLM 1997, p.161-165). The

BA also indicates that the NWFP guidelines for adjusting interim widths of Riparian Reserves are met (i.e., watershed analysis completed, site-specific analysis conducted, and the rationale presented through the appropriate NEPA process)(USDA and USDI 1994, p.B-13).

Programmatic Activities. Surveys will be conducted along 3 miles of stream on a regular basis to monitor spawning escapement. In addition, two culvert replacements expected to improve fish passage and 20 acres of non-commercial riparian siliviculture are proposed in 1999.

NMFS Conclusion. NMFS concurs with the above findings. Any associated adverse effects to anadromous salmonids or their habitat are expected to be so minor in magnitude that the long term recovery of habitat indicators at neither the site nor watershed scale will be impaired. However, NMFS once again notes the timing and magnitude of flow events in the fall have the potential to be increased by regeneration harvesting and/or roads (Jones and Grant 1996; BLM 1997, p.46; Thomas and Megahan 1998), and many degraded stream channels within the watershed may be sensitive to perturbations such as increased sediment deliveries and increased discharges (BLM 1997, p.55-58). NMFS also acknowledges that determining the potential effects of increased peak discharges during relatively small, fall storm events or attempting to separate regeneration harvest from other environmental influences is challenging, if not impossible. Spence *et al.* (1996, p. 210-211) recommend identifying areas where evidence of human-caused hydrologic disturbance exists (e.g., channel incision or widening, dewatering of stream reaches, gullying) and include provisions for mitigating those impacts as well as reversing those process to the "maximum extent possible." Adjusting the rotation schedule in upland forests to minimize the total area in a disturbed or immature hydrologic state may be appropriate where channel conditions have already been degraded or a lack of wood increases the potential for damage. Approximately 56% of the entire Big Creek subwatershed (46% of BLM lands) are in stands less than or equal to 40 years of age (BLM 1997, p. 75) and the BA indicates that 10 of 16 watershed habitat indicators are "not properly functioning," including all those reflecting channel condition and dynamics, road density, and riparian reserves. Therefore, NMFS notes a Conservation Recommendation for future management in the subwatershed (see page 30).

NMFS also notes that recovery of degraded riparian reserves on Federal lands may be especially important to overall watershed conditions in Big Creek since watershed analysis (BLM 1997, p.2-6) indicates that BLM matrix land and the BIA/Coquille Indian Tribe lands comprise 89% of the land to be managed consistently with the NWFP. Roughly 56% of the BLM lands are riparian reserves, but approximately 49% of these riparian reserves are in the 0- to 40-year age class. In addition, the road density in the watershed is approximately 4.3 miles per square mile (BLM 1994, Appendix A), and 5.3 miles per square mile within the portion of the basin administered by the BIA/Coquille Indian Tribe (BLM 1997, p.172).

Although not a Key Watershed, Big Creek is likely to be the most valuable subwatershed for anadromous salmonids within the Middle Fork watershed (BLM 1997 p. 123-124) and is a state coho salmon "core" area. Approximately 40% of the subwatershed is privately owned, including much of the lower mainstem of Big Creek and its riparian area.

Remote-Sandy Subwatershed. The BA indicates that eight timber sales proposed by the Coos Bay BLM in the Remote and Sandy subwatersheds will increase background turbidity in fish bearing streams because of ground disturbance associated with road construction, road decommissioning, culvert removal, and/or winter haul on unpaved roads. The increases in water turbidity will be short term and are not expected to be of sufficient duration or magnitude to result in a degradation of stream substrate.

The Coos Bay BLM predicts that 19 acres of commercial thinning within riparian reserves and conversion of 67 acres of interim NWFP riparian reserves to matrix allocation will not adversely affect riparian functions in the subwatersheds. The eight timber sales also propose 709 acres of regeneration harvesting and 129 additional acres of commercial thinning in the 23,900-acre analysis area. The regeneration harvesting and riparian reserve modifications are consistent with opportunities and priorities identified in the Sandy-Remote Watershed Analysis (BLM 1996b, p. 146-153). The BA also indicates that the NWFP guidelines for adjusting interim widths for Riparian Reserves are met (i.e., watershed analysis completed, site-specific analysis conducted, and the rationale presented through the appropriate NEPA process)(USDA and USDI 1994, p.B-13).

Programmatic Activities. Spawning surveys are proposed along 1 mile of Sandy Creek.

NMFS Conclusion. NMFS concurs with the above findings. Any associated adverse effects to anadromous salmonids or their habitat are expected to be so minor in magnitude that the long term recovery of habitat indicators at neither the site nor watershed scale will be impaired. However, NMFS once again notes a concern about the issue of regeneration harvest and potential resultant cumulative effects from increased peak flows. These actions will conduct even-age (regeneration) harvest on 708 acres or 3% of the analysis area, or 6.8% of the land administered by the BLM and the BIA/Coquille Indian Tribe. The concern is analogous to that described above for the Big Creek subwatershed; watershed analysis indicates many degraded stream channels which potentially could be adversely affected by increased peak flows or increased sediment deliveries (BLM 1996b, p. 50-58). Although the concern over the long term is somewhat reduced because approximately 70% of the BLM lands are either allocated to riparian and late successional reserve, or withdrawn due to poor timber production capability classification (TPCC), the watershed is not in a pristine state and most habitat indicators are in "not properly functioning" condition. Approximately 38% of the BLM lands in the Sandy-Remote subwatersheds (>40% of the riparian reserves) are in the 0- to 40-year class (BLM 1996b, p. 67&139), and the combined road density within the two subwatersheds is approximately 4.17 miles per square mile (BLM 1994, Appendix A). Therefore, NMFS notes a Conservation Recommendation for future management in these subwatersheds (see page 30).

The relative importance of the Sandy-Remote subwatersheds to OC coho salmon, OC steelhead, and searun cutthroat is difficult to assess, but Sandy Creek has been designated by the state as a coho salmon "core" area. Approximately 57% of the subwatershed is privately owned, including much of the mainstem of Sandy Creek and its riparian area.

Upper Rock Creek Subwatershed. The BA indicates that road decommissioning, culvert removal, and/or winter haul associated with two timber sales proposed by Coos Bay BLM will increase background turbidity in fish bearing streams. The increases in water turbidity would be short term and are not expected to be of sufficient duration or magnitude to result in a degradation of stream substrate. Anadromous fish reportedly are limited to the lower 2.25 miles of Rock Creek (BLM EA OR128-96-03). Although two ongoing and nearly complete timber sales are in the subwatershed, the remaining proposed sale and timber harvest consists of 85 acres of regeneration prescription and 52 acres of commercial thinning. No other activities other than road and culvert decommissioning are proposed within riparian reserves and full NWFP interim widths will be maintained. Watershed analysis specifically addressing key processes in the Rock Creek subwatershed has not been completed.

Programmatic Activities. Approximately 30% of the subwatershed is Late Successional Reserve. Approximately 640 acres of old-growth forest is managed as a research area.

NMFS Conclusion. NMFS concurs with the above findings. Any associated adverse effects to anadromous salmonids or their habitat are expected to be minor in magnitude and short-lived in duration. Impacts resulting from the project will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale. Approximately 68% of the BLM lands either are riparian and late successional reserves or have been administratively withdrawn from timber production (BLM EA OR128-96-03). Recovery of degraded riparian and watershed conditions within the federally administered portion of the watershed should continue unabated. Private lands makeup 64% of the subwatershed.

Camas Valley Subwatershed Timber Sale. The BA indicates that winter haul, road decommissioning and culvert removal associated with the Ragu Timber Sale will lead to intermittent, short duration degradation of the turbidity and substrate habitat indicators in subwatershed streams for 1-3 years. OC steelhead and resident trout are the only salmonids likely to be adversely affected because Bradford Falls severely limits upstream fish passage to Camas Valley. The sale also proposes renovating[11] 6.3 miles of existing road which should lessen the effects of winter haul.

The sale proposes 131 acres of regeneration harvest (1% of BLM's lands in the subwatershed). No harvest activities are proposed within riparian reserves and Roseburg BLM predicts that the riparian reserves will maintain the watershed features responsible for protecting the aquatic systems. Although the bulk of BLM lands (i.e., 87%) is matrix allocation, approximately 40% of the matrix is likely to be riparian reserves. The other 13% of the BLM lands are late successional reserve (BLM 1994, p. 9). Watershed analysis evaluating the ecological condition and addressing key processes in the Camas Valley subwatershed has not been completed.

[11] Renovation could include soil stabilization, blading, brushing, culvert cleaning, culvert replacement, installation of additional culverts, construction of armored drain dips, and road resurfacing.

Programmatic Activities. Approximately 20 miles of road work designed to prevent storm damage and reduce the interception of runoff (e.g., upsizing culverts, armored dips to prevent stream diversion, outsloping roads, installing additional cross drains) and another 2 miles of road decommissioning is proposed. Routine precommercial thinning of young managed tree stands and road maintenance is also proposed.

NMFS Conclusion. NMFS concurs with the above findings. Any associated adverse effects to anadromous salmonids or their habitat are expected to be minor in magnitude and short-lived in duration. Impacts resulting from the project will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale. The proposed road improvements should reduce future storm damage. Activities on non-federal lands are an important consideration in the subwatershed given that approximately 65% of the approximately 32,000-acre subwatershed is privately owned and managed.
North Fork Coquille Watershed

- 98,469 acres - approximately 48% administered by CBBLM.

- Completed Watershed Analyses include North Coquille Subbasin (1995), Fairview Subbasin (1995), and the Middle Creek Subbasin (1995).

- Approximately 5800 acres of the Upper North Fork Coquille is a Tier 1 Key Watershed. Approximately 7,000 acres of the Middle Creek subwatershed is a Tier 1 Key Watershed (Cherry Creek).

Woodward 1-11 Commercial Thinning. The Woodward 1-11 Commercial Thinning is located within the Fairview subwatershed. The BA indicates that the activities associated with this action will temporarily degrade water quality and riparian habitat indicators. Approximately 140 of the 262 acres of 50-year-old Douglas fir remaining to be thinned are within riparian reserves. Although riparian canopy closure will be decreased by the prescribed density management, water temperatures are not expected to be increased, and canopy closure is expected to achieve pre-project conditions within several years. Replacement of a culvert to improve fish passage is likely to temporarily increase water turbidity.

The riparian thinning's objectives of increased conifer tree growth and release of minor vegetation species are consistent with watershed analysis findings (BLM 1995, p. iv) and NWFP standard and guideline TM-1(c).

The BLM manages approximately 35% of the 19,267-acre Fairview subwatershed which contains Woodward Creek (BLM 1995, p. II-1). The overall poor stream habitat in this and other watersheds in the Coquille subbasin is a reflection of longstanding riparian management that has resulted in poor LWD recruitment potential from adjacent riparian areas for over 50% of the fish bearing stream miles (BLM 1995, p. V-1).
Cherry Creek Red Alder Roadside Maintenance Sale. This roadside maintenance would temporarily decrease riparian canopy closure along 3 miles of road within the riparian reserve of the Cherry Creek

Key Watershed (Middle Creek subwatershed). The action proposes to selectively remove a portion of the overhanging alder which affect driving visibility and continually create debris capable of plugging culverts. Although indirect lighting to the stream channel may be temporarily increased, no adverse effects to fish or fish habitat are expected because only a small proportion of the existing roadside trees will be removed and no trees providing direct shade, stream wood recruitment, or bank stability will be removed.

The action is consistent with NWFP standard and guideline TM-1(c) because suppressed Douglas-fir, hemlock, western red-cedar, as well as other remaining hardwoods are expected to benefit from the alder removal. In addition, suitable project criteria (NWFP standard and guideline RM-2(d)) have been developed to minimize adverse effects to aquatic resources and prevent unwanted diversions of ditch and road runoff.

Programmatic Activities. The BLM proposes upgrading 4 culverts in the North Fork Coquille and Middle Creek subwatersheds. If funding allows, two additional instream habitat improvement and culvert replacement projects are proposed in Middle Creek.

NMFS Conclusion. NMFS concurs with the above findings. Any associated adverse effects to anadromous salmonids or their habitat are expected to be minor in magnitude and short-lived in duration. Impacts resulting from the project will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale. NMFS notes that watershed analysis indicates that the first priorities for aquatic restoration in the Fairview subwatershed should be stabilizing the road system and completing culvert inventories (BLM 1995, p. X-2) and encourages continued consideration of these recommendations in future planning. Activities on non-federal lands are an important consideration in the subwatershed given that approximately 65% of the subwatershed, including much of the mainstem North Fork Coquille River and its riparian areas, are privately owned.

East Fork Coquille Watershed

- 85,785 acres - approximately 51% administered by CBBLM and BIA/Coquille Indian Tribe.
- East Fork Coquille Watershed Analysis completed by CBBLM (first iteration October, 1998, with a revised draft dated May 10, 1999).
- No Key Watersheds.

Only programmatic activities are proposed. CBBLM fish habitat improvements proposed include addition of instream structure and replacement of four culverts in the Yankee Run drainage. The BIA/Coquille Indian Tribe proposes a bike trail in cooperation with the CBBLM.

NMFS Conclusion. NMFS concurs with the above findings. Any associated adverse effects to anadromous salmonids or their habitat are expected to be minor in magnitude and short-lived in duration. Impacts resulting from the project will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale. Approximately 79% of the 45, 448 acres managed by the CBBLM are designated as Late Successional, Marbled Murrelet, or Riparian Reserves (BLM 1999a, p. I).

South Fork Coos Watershed

- 160,388 acres - approximately 20% administered by CBBLM.
- The Tioga Creek Subwatershed Watershed Analysis is complete and a Draft South Fork Coos Watershed Analysis is near completion.
- The Tioga Creek subwatershed is a Key Watershed.

BLM lands within this large watershed are concentrated in the upper portions of the drainage with 24,700 acres located in the Tioga Creek subwatershed. Only routine programmatic actions (e.g., dispersed camping, road maintenance and repair) are proposed by CBBLM.

NMFS Conclusion. NMFS concurs with the Level 1 team review. Any associated adverse effects to anadromous salmonids or their habitat are expected to be minor in magnitude and short-lived in duration. Impacts resulting from the project will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale. Approximately 90% of the lands managed by the CBBLM are designated as Late Successional or Riparian Reserves (BLM 1999b, p. 49). Activities on non-federal lands are an important consideration because approximately 80% of the watershed is privately owned.

Coos Bay North/Coos Bay South Watershed

- 138,261 acres - approximately 4% administered by CBBLM and the Siuslaw National Forest.
- No watershed analysis has been completed.
- No Key Watersheds.

Only programmatic actions, including routine maintenance and repair of roads and recreational facilities are proposed within this watershed by the administrative units. Although some forested land southeast of Coos Bay managed by the BLM is included in the land base, most of the federal lands are sand dunes managed as the Oregon Dunes Natural Recreational Area. A developed campground and a boat ramp are among the facilities administered by the action agencies.

NMFS Conclusion. NMFS concurs with the Level 1 team findings and notes that activities on non-federal lands are an important consideration in the subwatershed.

Tenmile and Umpqua Dunes Watershed

- 62,363 acres - approximately 14% administered by the SNF.
- No watershed analysis has been completed, although an assessment of Tenmile Lake paleolimnology was recently conducted for the City of Lakeside.
- No Key watersheds.

Only programmatic actions, including routine maintenance and repair of roads and recreational facilities, are proposed within this watershed by the administrative units. Most of the federal lands are contained within the ODNRA, which manages two developed campgrounds and an important migratory corridor for anadromous salmonids in lower Tenmile Creek. The bulk of the upper watershed and Tenmile Lakes are state or privately owned.

NMFS Conclusion. NMFS concurs with the Level 1 team findings, and notes that activities on non-federal lands are an important consideration in the subwatershed.

Determine whether the species can be expected to survive (with an adequate potential for recovery) under the effects of the proposed or continuing action, the environmental baseline, and any other cumulative effects.

At a regional scale, the biological requirements for freshwater life stages of most anadromous salmonids within the action area are not being met under the current environmental baseline. The LRMP Opinion also concluded that any further degradation of these conditions is expected to have a significant impact due to the level of risk that listed, proposed, and candidate salmonids presently face.

Full implementation of the NWFP is expected to result in improved habitat conditions for OC coho, OC steelhead, and searun cutthroat on Federal lands. This in turn is expected to provide increased survival of various life stages of these fish and an increased probability of restoring and maintaining viable populations.

Therefore, a Not Likely to Jeopardize determination for OC coho, OC steelhead, or searun cutthroat has two requirements: (1) The proposed project is in compliance with the standard and guidelines for the relevant land allocations (e.g., Key Watersheds, Late Successional Reserves, and Riparian Reserves), and (2) the action meets all pertinent ACS objectives.

The NMFS concurs with the agencies and Level 1 team determinations of consistency with the NWFP's land allocations, standards and guidelines, and the four essential components of the Aquatic Conservation Strategy (ACS): Riparian reserves, key watersheds, watershed analysis, and watershed restoration. The NMFS also concurs with the Level 1 team's review finding that projects are consistent with the ACS objectives relevant to listed, proposed, and candidate salmonids.

Cumulative Effects

Cumulative effects (as defined in 50 CFR § 402.02) are discussed on pages 40-43 of the LRMP Opinion. The respective analyses of the biological requirements, environmental baseline or cumulative effects described above are incorporated herein by this reference. The NMFS is not aware of any newly available information that would materially change these previous analyses. The final rules for listing OC coho (63 FR 42587), the OC steelhead (63 FR 13347), and searun cutthroat (64 FR 16397) discuss at length the influences that state and private actions have on these species and their survival.

The importance of management practices on private land in determining the rate and magnitude of improvement in Pacific salmonid production in the action area is in large part a reflection of the land ownership pattern. About 70% of the action area, including most reaches of major mainstem rivers and other low gradient valley bottom streams, are under private or state ownership and are likely to have the greatest potential for reestablishing off-channel rearing habitat critical to OC coho.

CONCLUSIONS

Using the Matrix of Pathways and Indicators and the Checklist, as described in the LRMP Opinion, NMFS concludes that the proposed actions meet all pertinent ACS objectives since the net effect of implementation maintains watershed habitat indicators and ecological processes generally defining biological requirements of Pacific salmonids. Notwithstanding the potential for minor, short-term adverse effects, actions fully consistent with the NWFP's ACS objectives, land allocations, and standards and guidelines are expected to maintain or restore essential aquatic habitat functions and should not impede recovery of Pacific salmonid habitat.

Ecosystem recovery is expected to continue on federal lands through the implementation of riparian reserves, key watersheds, watershed analysis, and watershed restoration (FEMAT 1993, p.V-75). Because the ACS is based upon natural disturbance processes, it may take decades to over a century to accomplish its objectives, although some improvements in aquatic ecosystems may occur in 10 to 20 years (FEMAT 1993, p.V-30).

Section 7(a)(2) Determinations

NMFS concludes that implementation of the proposed actions in Tables 3 and 4 are not likely to jeopardize the continued existence of OC coho, OC steelhead, or searun cutthroat populations below barriers. In addition, NMFS concludes that the ongoing and proposed actions will not result in the destruction or adverse modification of proposed critical habitat for OC coho. In reaching these conclusions, NMFS has utilized the best scientific and commercial data available as documented herein and by the BA and documents incorporated by reference. Additional basis for this determination is given in the LRMP Opinion, p. 44-46.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize adverse modification of critical habitat, or to develop additional information.

The NMFS believes the following conservation recommendation is consistent with those obligations, and therefore should be implemented by the administrative units. The NMFS also recommends this measure because it is expected to further streamline future section 7 consultation for proposed actions.

1. Timber Sale Planning

Prior to prescribing any additional regeneration harvest in the watershed and subwatersheds listed below, the administrative unit should have qualified personnel (e.g., professional hydrologists or fishery biologists with training in fluvial geomorphology) assess the potentially affected stream channels for evidence of hydrologic disturbance (e.g., channel incision or widening, dewatering of stream reaches, gullying) and if appropriate, include provisions for mitigating those identified impacts and reversing those processes contributing to or exacerbating the condition in sensitive stream channels to the maximum extent possible.

- Rowland-Baker-Salmon Key Watershed
- Big Creek Subwatershed
- Sandy-Remote Subwatersheds

INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patters such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement (ITS) specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures. An ITS does not apply to candidate or proposed species. While effects on OC steelhead and searun cutthroat were considered in this opinion, the terms and conditions and reasonable and prudent measures set forth in this ITS do not apply to OC steelhead and searun cutthroat. Should one or both of these candidate species become listed in the future, this ITS would become effective for these species upon adoption of this conference opinion as a biological opinion.

The measures described below are non-discretionary. They must be implemented by the USFS, BLM and BIA so that they become binding conditions necessary in order for the exemption in section 7(o)(2) to apply. The USFS, BLM and BIA have a continuing duty to regulate the programmatic actions covered in this ITS. If the USFS, BLM or BIA (1) fails to adhere to the terms and conditions of the ITS, and/or (2) fails to retain the oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Amount or Extent of the Take

The NMFS anticipates that some programmatic actions which are fully consistent with the LRMP and RMP standards and guidelines may still have more than a negligible likelihood to result in incidental take of listed Oregon Coast coho salmon. Incidental take associated with these programmatic actions is expected from detrimental effects on aquatic habitat parameters including substrate quality, turbidity, and suspended sediment levels, all of which may directly affect the life history of these fish.

Adverse effects of management actions such as these are largely unquantifiable in the short-term, and may not be measurable as long-term effects on the species' habitat or population levels. Therefore, even though the NMFS expects some low level of incidental take to occur due to these actions, the best scientific and commercial data available are not sufficient to enable the NMFS to estimate a specific

amount of incidental take to the species themselves. In these instances, the NMFS designates the expected level of take as "unquantifiable."

This ITS is effective for one year from the date of its issuance. At that time, the NMFS will evaluate the effectiveness of the review and tracking requirements. The USFS, BLM and BIA will need to reinitiate this consultation to obtain incidental take authorization for any programmatic actions that are beyond the scope of those described in this Opinion.

Effect of the Take

Sedimentation resulting from road construction, road and culvert decommissioning, and winter haul is expected to be the primary source of incidental take associated with the proposed actions listed in Tables 3 and 4. Because of the limited amount of new road construction and the constraints on locating new permanent and semi-permanent road, sediment impacts are expected to be minimized. Long-term sediment inputs should be reduced through continued road decommissioning or repair of high risk sites. Although the most effective method to prevent adverse effects from winter haul is through seasonal restrictions, the timely administration of existing stipulations in the pertinent timber sale contracts should limit the extent and duration of resultant sediment delivery. As long as the stipulations are followed, no further reasonable and prudent measures are needed to minimize incidental take from winter haul.

Effects of timber harvesting in riparian reserves are also expected to be minimized because of location, landform, and harvest method. The NMFS expects that the incidental take associated with the other effects associated with timber harvest discussed in this opinion and all other proposed actions listed in Tables 3 and 4, will also be minimal.

Adverse effects resulting from management actions such as these are largely unquantifiable in the short-term and may not be measurable as long-term effects on the species' habitat or population levels. Therefore, even though the NMFS expects some low level of incidental take to occur due to these actions, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species themselves.

The ITS in the LRMP Opinion, p. 59-75, provided reasonable and prudent measures and terms and conditions to avoid or minimize the take of listed salmonids from implementation of the administrative unit's land management plans, instream habitat enhancement, culvert upgrades, road decommissioning, road construction, livestock grazing, mining, and riparian rock quarry operation that will be applied to each site specific action within each applicable program.

The ITS in the LRMP Opinion, p. 61, also provided for the Level 1 team to incorporate adequate measures into the proposed actions to minimize the likelihood of incidental take. Accordingly, Level 1 team review found that compliance with the NWFP's standards and guidelines for the relevant land allocations, as well as all reasonable and prudent measures, and corresponding terms and conditions (with

the exception of 8(d)(ii) for the Skinny Doe Timber Sale) in the LRMP Opinion are appropriate for the actions covered by this letter, as listed in Tables 3 and 4. Site specific conditions and restoration accomplishments by the SNF were found to warrant tailoring term and condition 8(d)(ii) to this individual action (see page 18 of this Opinion).

For the actions not addressed by the ITS in the LRMP Opinion, (e.g., timber harvest and associated miscellaneous land management actions) listed in Tables 3 and 4, the Level 1 teams found that incidental take of anadromous salmonids resulting from these actions has been adequately minimized by project design. Thus, no reasonable and prudent measures in addition to project requirements are necessary in this Opinion for these actions.

NMFS hereby applies the findings, reasonable and prudent measures, and terms and conditions (with the exception described above for 8(d)(ii)) set forth in the ITS of the LRMP Opinion to the actions described in this Opinion. Therefore, NMFS authorizes such minimal incidental take provided that the USFS, BLM, BIA and their applicants comply with those measures, terms and conditions.

Reasonable and Prudent Measures

In addition to the RPMs described in the ITS of the LRMP Opinion, the NMFS believes that the following additional reasonable and prudent measure is necessary and appropriate to minimize take of OC coho salmon resulting from individual actions within the categories of programmatic actions described in this Opinion.

1. Document and report all actions that are covered by this ITS.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the USFS, BLM and BIA must comply with the following terms and conditions which implement the reasonable and prudent measure described above. These terms and conditions are non-discretionary. The USFS, BLM and BIA shall do the following:

Reporting Requirements:

A. All projects covered by this Opinion shall be documented on a report form to be developed by the Level 1 team.

B. The USFS, BLM and BIA shall present the results of the reporting to the Level 1 team within one year of issuance of this ITS.

REINITIATION OF CONSULTATION

To ensure protection for a species assigned an unquantifiable level of take, this consultation (or conference in the case of OC steelhead and searun cutthroat), must be reinitiated if: (1) The amount of extent of take specified in the ITS is exceeded or is expected to be exceeded; (2) new information reveals effects of the action may affect listed species in a way not previously considered; (3) the action is modified in a way that causes an effect on listed species that was not previously considered; and
(4) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR § 402.16). The LRMP Opinion, p. 51, lists examples of situations or findings which require reinitiation of consultation.

Questions regarding the consultation or conferencing on these actions should be directed to Craig Burns of my staff at (541) 957-3355.

Sincerely,

William Stelle, Jr.
Regional Administrator

cc: Mike Clady, Siuslaw National Forest
Dan Delany, Siskiyou National Forest
Randy Frick, Rogue River National Forest
Bill Hudson, Coos Bay BLM District
Travis Hunt, BIS
Jon Raby, Roseburg BLM District

Table 3 - Ongoing and Proposed Programmatic Federal Actions - within the Oregon Coast ESU south of the Umpqua River to Cape Blanco (Coos/Blanco).

Coos Bay and Roseburg Bureau of Land Management Districts; BIA/Coquille Indian Tribe; Siskiyou and Siuslaw National Forests. Each action consists of multiple individual projects within Section 7 watersheds. Individual effects from the actions are anticipated to be localized (as determined by the project Fishery Biologist) and of short duration (generally <1 year or seasonal in nature). The project Fishery Biologist/ Interdisciplinary Team is responsible for consulting individually on actions which have effects which are not localized or of short duration.

A. Actions which are May Affect, Likely to Adversely Affect (LAA) within Riparian Reserves

Road Maintenance, Road Repair.
Road Decommissioning.
Culvert Replacement.
Aerial Fertilization.
Salmonid Spawning Surveys.
Stream surveys, fish population surveys, snorkel/mask surveys, aquatic/riparian monitoring.
Pump Chance construction and maintenance, Helicopter Pond Mtce., Helicopter Water Use for fire.
Watershed Restoration Projects:
- road stormproofing/drainage repair
-road obliteration
- upslope erosion repair
-instream habitat improvement
- riparian silviculture treatments
- culvert upgrades.

Fish Habitat Restoration and Project Construction/Maintenance.
Emergency Repair of Federally-Owned Roads (ERFO)Projects, Road Repairs.
Dispersed Camping and Campground Maintenance.
Dispersed and Developed Camping.
Motorized and Non-motorized Recreation Activities.
Trail Construction, Hazard Tree Removal and Trail Maintenance.
Trailhead Site Construction and Maintenance.
Prescribed Fire, Fire Suppression and Pre-suppression Activities, Broadcast Burning.
Meadow Restoration Projects.
Special Forest Products.
Special Use Permits.
Guide permits.
Precommercial Thinning.
Roadside Salvage and Hazard Tree Removal (within Road Prism).
Tail trees and Guyline trees.
Silvicultural Treatments:
- tubing -thinning
-mulching -weeding
- scalping - fertilization
- gopher baiting - release work, brushing
- planting -pruning
-shade cards -cone collection
-scion wood collection.

Wildlife Projects (general):
-Tree topping, wildlife snag creation.
Erosion Control Projects:
-Seeding, mulching, fertilization.
Noxious Weed Control.
Fence Construction and Maintenance.
Boat Ramp Use.
Gate Installation and Gate Maintenance.
Barrier Installation and Maintenance.
Dump/Trash Clean Up.
Sign Installation/Maintenance.
Grazing Allotments with Allotment Management Plans.
Range Improvement Projects.
Non-motorized and Motorized Boating Activities.
Mining activities: Gold panning, Lode Claims (non-motorized), Recreation Suction Dredging (intake less than 4 inches diameter, less than 10 H.P.), Non-discretionary Mining Operations.
Road construction, Road Re-construction.
Rock Quarry Operations.
Bridge-building, Bridge Repair, Low-water Ford Construction and Bridge/ford obliteration.
Administrative Site Mtce.
Hazardous Materials Cleanup.

Table 4 - Ongoing and Proposed Individual Actions (by administrative unit) that are "likely to adversely affect" (LAA) OC coho, and "may affect, but not likely to jeopardize" OC steelhead or OC coastal cutthroat below longstanding natural barriers.

Siskiyou National Forest
Powers Ranger District Skinny Doe T.S. Port Orford Cedar Salvage T.S. S.Fk Coquille Road and Flood Repair Sixes Road and Flood Repair (Sixes River)
Coos Bay District BLM
Myrtlewood Resource Area North Fork Chetco T.S. Upper Sandy T.S. Sand Fly T.S. Sandy Change T.S. Belieus Brothers T.S. Frenchie Creek T.S. Remote Control T.S. Slide Show T.S. South Fork Skyline T.S. Rock-N-Roll T.S. Rock Again T.S. **Umpqua Resource Area** Woodward 1-11 Commercial Thinning (only activities implemented after January 28, 1999) Cherry Creek Roadside Maintenance Alder Sale
Roseburg District BLM
South River Resource Area Ragu T.S.
BIA/Coquille Indian Tribe
Coquille Forest Chu-aw Clau-she T.S.

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